

IN THE CLAIMS

1. (Previously Presented) A regenerative oxidizer, for removal of pollutants from waste gas comprising:

an elongated housing having an inlet duct and an outlet duct;

a heat media bed disposed circumferentially within the housing;

a combustion chamber equipped with a burner or electric heater;

a distribution cylinder disposed in the center of the housing;

a separator which is in contact with the heat media bed and the lower section isolated by the inlet chamber; and

a rotor which consists of a rotor cylinder having multiple distribution wings, a rotor cover surrounding the distribution wings and an outlet hole connected to the outlet duct, disposed within the distribution cylinder, the rotor cover including a partition to prevent mixing of waste gases and purified gases.

2. (Original) A regenerative oxidizer as in claim 1 wherein a catalyst bed disposed circumferentially above the heat media bed.

3. (Original) A regenerative oxidizer as in claim 1 wherein the separator consists of a cylindrical outer wall which fits to the inner wall of the housing and is divided into multiple cells by isolating plates.

4. (Canceled).

5. (Previously Presented) A regenerative oxidizer as in claim 1 wherein the distribution wings, having an upper and lower outlet hole, are disposed with equal spacing in the upper section of the rotor along the circumference and approximately one-half of the said distribution wings are covered by a rotor cover.

6. (Original) A regenerative oxidizer as in claim 1 wherein a separate purge section is disposed within the rotor between the influent distribution zone and the effluent zone.

7. (Original) A regenerative oxidizer as in claim 1 wherein a vertical partition is disposed within the rotor on the other side of a purge section.

8. (Original) A regenerative oxidizer as in claim 1 wherein the gap between the surface of the separator's inner wall and the distribution wings are sealed by physical, pneumatic or hydraulic means.

9. (Original) A regenerative oxidizer as in claim 8 wherein the sealing means are Teflon, springs devices or O-rings.

10. (Withdrawn) A method for removal of pollutants from waste gases comprising the steps of:

(a) providing a regenerative oxidizer having an elongated housing with an inlet duct and an outlet duct; a heat media bed disposed circumferentially within the housing; a combustion chamber equipped with a burner or electric heater; a distribution cylinder disposed in the center of the housing; a separator which is in contact with the heat media bed and the lower section isolated by the inlet chamber; and a rotor disposed within the distribution cylinder;

(b) causing incoming waste gases to flow via inlet duct into rotor and are distributed by distribution wings to separator;

(c) causing the waste gases to flow upwardly through the heat media bed and be treated in the combustion chamber;

(d) causing the purified gases to flow downwardly through heat media bed;

(e) causing the purified gases pass through the rotor and to the inner section of rotor cylinder;

(f) causing the purified gases pass through lower outlet hole of rotor and discharge via outlet duct into the atmosphere.

11. (Withdrawn) A method for removal of pollutants from waste gases as in claim 10 wherein a catalyst bed is disposed circumferentially above the heat media bed.

12. (Withdrawn) A method for removal of pollutants from waste gases as in claim 10 wherein a separate purge section is disposed within the rotor between the influent distribution zone and the effluent zone.

13. (Withdrawn) A method for removal of pollutants from waste gases as in claim 10 wherein a vertical partition section is disposed in the opposite side of the purge section within the rotor.